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• • R E M A R K S • •

The Official Action of July 17, 2002 has been thoroughly studied. Accordingly, the changes presented herein for the application, considered together with the following remarks, are believed to be sufficient to place the application into condition for allowance.

By the present amendment, the specification has been changed at page 9, line 9 to correct an inadvertent typographical error which resulted in reference numeral 5 being unintentionally typed as reference numeral 4.

Also by the present amendment, independent claims 1, 10 and 15 have been deleted and rewritten as new independent claims 21-23 respectively. New independent claims 21-23 more clearly describe applicants' invention and are fully supported in the original specification, as the Examiner can readily ascertain.

Also by the present amendment, dependent claims 14 and 16 have been cancelled inasmuch as the limitations of these claims have been incorporated into claims 22 and 23.

In addition, 2, 3, 5-9, 11-13 and 17-20 have been amended to correct typographical and grammatical errors and sentence structure and to avoid the reference to the JIS standard.

Entry of the changes to the claims is respectfully requested.

On page 2 of the Official Action the Examiner correctly noted the typographical error on page 9, line 9 which has been corrected by the present amendment to the specification.

Claims 6, 7 and 12 stand rejected under 35 U.S.C. §112, second paragraph. Under this rejection the Examiner has taken the position that "[t]he use of standards such as the JIS recited in claims 6, 7 and 12 is impermissible.

In response to the rejection of claims 6, 7 and 12 under 35 U.S.C. §112, second paragraph, these claims have been amended herein to avoid the reference to the JIS standard.

With regard to claim 20 the Examiner stated that the limitation "the group" lacked sufficient antecedent basis. Claim 20 has appropriately been corrected by the present amendment.

Claims 10, 12, 13, 15 and 17 stand rejected under 35 U.S.C. §102(b) as being anticipated by Japanese Laid-Open Publication No. 10-95071 to Kuze et al.

Claims 1, 3, 4, 6 and 7 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Kuze et al. in view of U.S. Patent No. 5,671,927 to Schweiger

Claim 2 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Kuze et al. in view of U.S. Patent No. 5,671,927 to Schweiger

Claim 5 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Kuze et al. in view of U.S. Patent No. 6,102,603 to Tagi et al.

Claims 8 and 9 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Kuze et al. in view of Schweiger and further in view of Japanese Publication No. 4-211934 to Tachibana et al.

Claim 11 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Kuze et al.

Claims 14, 16, 19 and 20 rejected under 35 U.S.C. §103(a) as being unpatentable over Kuze et al. in view of U.S. Patent No. 6,145,847 to Meada et al.

Claim 18 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Kuze et al. in view of Meada et al.

For the reasons set forth below, it is submitted that all of the pending claims are allowable over the prior art of record and therefore, each of the outstanding rejections of the claims should properly be withdrawn.

Favorable reconsideration of the Examiner is earnestly solicited.

The Examiner has relied upon Kuze et al. in each of the outstanding rejections as disclosing "a gasket comprising a resin film, a rubber layer molded to the resin film." The Examiner states that the "rubber layer is molded from a liquid" and that "the liquid is silicone rubber." The Examiner further states that Kuze et al. "discloses the gasket comprises a carrier member, an elastomeric polymer member on the carrier member where their thickness is about .1mm" and that "the elastomeric polymer is silicone." The Examiner further states that Kuze et al. "discloses the gasket comprises a carrier member and a self bonding elastomer."

Japanese Laid-Open Publication No. 10-95071 to Kuze et al. discloses a composite resin-rubber film that is preferably "usable for a sealing or a cushioning material for various fields" as taught in paragraph [0001].

The rubber composition comprises silicone rubber as a main component has a good adhesive strength between silicone rubber and polyester films as discussed in paragraph [0058].

As stated in paragraph [0009], an addition reaction type silicone rubber may be used. An agent for improving adhesion having a functional group that it active to radical reactions is used

in the silicon rubber composition. Such adhesion improving agents are acrylic acid derivatives or allyl derivatives as mentioned in paragraph [0012].

The composition film of Kuze et al. can be made by either coating or molding.

Kuze et al. does not teach the adhesion improving agent of the present invention which are organosilicone compounds having at least one H atom directly bonded to the Si atom.

Applicants' use of a silane coupling element as the adhesive component strongly adheres to the resin file but does not adhere to metals as is the case of conventional silicone rubber compositions.

Moreover, Kuze does not teach that the composite-rubber film can be used in contact with an electrolyte solution.

New independent claims 22 and 23 require a limiter 5a that limits both the compression of the elastomeric member and the nipping strength of the holder. The prior art relied upon by the Examiner does not teach or render obvious such a structural feature, which as disclosed by applicants remarkably improves the working efficiency of the membrane-electrode assembly (MEA) which is held easily and exactly aligned under a constant pressure.

The Examiner has relied upon Tachibana et al. as teaching a gasket for use in a condenser.

Tachibana et al. teach rubber sheet laminates that comprise a phenol resin-containing sheet and a butyl rubber sheet, which are resistant to electrolytes and can be used as a packing element for a condenser. Tachibana et al. identify two factors in paragraph [0010] which produce good adhesion, one being that good adhesion between the resin and the rubber is achieved by using a

rubber composition that comprises a partially cross linked butyl rubber having a certain amount of cross linkable vinyl group and an organic peroxide. The other factor is that the corrosion of an electrode of a condenser can be prevented by using a phenol resin containing sheet having a lesser amount of an electrolyte component.

As taught in paragraph [0022] the amount of electrolyte components (e.g., chlorine or sulfate) both in the phenol resin and the butyl rubber sheet is as small as possible, and especially smaller in the phenol resin.

Tachibana et al. only refers to phenol resin and butyl rubber, but does not mention a silicon rubber composition having a good adhesiveness to reins nor fuel cells.

Accordingly the Examiner's reliance upon Tachibana et al. is misplaced.

The remaining prior art references do not address or overcome the deficiencies with Kuze et al. and Tachibana et al. discussed above.

Based upon the above distinctions between the prior art relied upon by the Examiner and the present invention, and the overall teachings of prior art, properly considered as a whole, it is respectfully submitted that the Examiner cannot rely upon the prior art as required under 35 U.S.C. §102 as anticipating applicants' claimed invention. Moreover, it is submitted that the Examiner cannot properly rely upon the prior art as required under 35 U.S.C. §103 to establish a *prima facie* case of obviousness of applicants' claimed invention.

It is, therefore, submitted that any reliance upon prior art would be improper inasmuch as the prior art does not remotely anticipate, teach, suggest or render obvious the present invention.

It is submitted that the claims, as now amended, and the discussion contained herein clearly show that the claimed invention is novel and neither anticipated nor obvious over the teachings of the prior art and the outstanding rejection of the claims should hence be withdrawn.

Therefore, reconsideration and withdrawal of the outstanding rejection of the claims and an early allowance of the claims is believed to be in order.

It is believed that the above represents a complete response to the Official Action and reconsideration is requested.


The prior art cited on page 6 of the Official Action, but not relied upon by the Examiner has been noted. This prior art is not deemed to be particularly pertinent to applicants' claimed invention.

If upon consideration of the above, the Examiner should feel that there remains outstanding issues in the present application that could be resolved, the Examiner is invited to contact applicants' patent counsel at the telephone number given below to discuss such issues.

To the extent necessary, a petition for an extension of time under 37 CFR §1.136 is hereby made. Please charge the fees due in connection with the filing of this paper, including extension

of time fees, to Deposit Account No. 02-0385 and please credit any excess fees to such deposit account.

Respectfully submitted,

  
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Marked-Up Copy of the Claims  
As Amended on November 18, 2002

2. (Amended) A process for producing a film-integrated gasket according to Claim [1,]  
21, wherein the resin film has a thickness of about 10 ~ about 500  $\mu\text{m}$ .
3. (Amended) A process for producing a film-integrated gasket according to Claim [1,]  
21, wherein the rubber layer having an adhesiveness to the resin film is a rubber layer molded  
from liquid or paste rubber.
5. (Amended) A process for producing a film-integrated gasket according to Claim 4,  
wherein the silicone rubber is an addition reaction type silicone rubber.
6. (Amended) A process for producing a film-integrated gasket according to Claim 3,  
wherein the rubber layer is a rubber layer having a [low JIS A] hardness of 70 or less.
7. (Amended) A process for producing a film-integrated gasket according to Claim 3,  
wherein the rubber layer is a rubber layer having a [low JIS A] hardness of about 10 ~ about 40.
8. (Amended) A process for producing a film-integrated gasket according to Claim [1  
for use] 21, wherein the gasket is used as a thin [seal.] sealing element.

11. (Amended) A static gasket as claimed in Claim [10] 22, wherein said carrier [having] has a thickness of between about 10 to 500  $\mu\text{m}$ .

12. (Amended) A static gasket as claimed in Claims [10] 22, wherein said elastomeric polymer member is selected from [a group of] silicone, fluorosilicone, nitrile rubber and EPDM.

13. (Amended) A static gasket as Claimed in Claim [10] 22, wherein said elastomeric polymer member [having] has a [JIS A] hardness of between about 10 to 70.

17. (Amended) A static gasket [s] as claimed in Claim [15] 23, wherein [herein] said elastomeric polymer member is selected from [a group of] silicone, fluorosilicone, nitrile rubber and EPDM.

18. (Amended) A static gasket as claimed in Claim [16 herein] 16, wherein said carrier [having] has a [thicknes] thickness of between about 10 to 500  $\mu\text{m}$ .

19. (Amended) A static gasket as claimed in Claim 16, wherein said carrier member and said elastomeric member [having] have a combined [thickness, said] thickness in the range of about 0.1 to 10 mm.

20. (Amended) A static gasket as claimed in Claim 16, wherein said carrier member is made of a polymer film, said polymer film selected from [the group of polyester, polyimide, and polamide.] polyesters, polyimides and polyamides.

New claims 21-23 were added as follows:

--21. (New) A process for producing a film-integrated gasket for sealing fluids of a fuel cell, said process comprising:

providing a mold;

providing a resin film in the mold;

molding a rubber layer on said resin film to produce a film-integrated gasket, said rubber layer comprising an addition reaction type silicone rubber and having an adhesive component which bonds to said resin film and prevents contamination of a fluid being sealed; and

contacting the produced film-integrated gasket with an electrolyte solution.--

--22. (New) A static gasket for sealing fluids, said static gasket comprising:

a first carrier member having first and second opposite end portions;

a second carrier member having first and second opposite end portions, said second carrier member being disposed under the first carrier member;

an elastomeric polymer member disposed on an upper surface of the first end portion of the first carrier member, said elastomeric polymer member having an adhesive component which

causes said elastomeric polymer member to bond to said carrier member and prevents contamination of a fluid being sealed, said first carrier member and said elastomeric polymer member having a combined thickness in the range of from about 0.01 to about 10 mm; and

a compression limiter provided adjacent to said elastomeric polymer member to limit both the compression on said elastomeric polymer member and a distance between the second end portions of the first and second carrier members so as to support a holder to be supported when the first and second carrier members are compressed toward each other in a vertical direction.--

--23. (New) A static gasket for sealing fluids, said static gasket comprising:

a first carrier member having first and second opposite end portions;

a second carrier member having first and second opposite end portions, said second carrier member being disposed under the first carrier member;

a self-bonding elastomer formed on said first carrier member, said elastomer member being bonded directly to said first carrier member exclusive of an additional adhesive layer; and

a compression limiter provided adjacent to said elastomeric polymer member to limit both the compression on said elastomeric polymer member and a distance between the second end portions of the first and second carrier members so as to support a holder to be supported when the first and second carrier members are compressed toward each other in a vertical direction.--

Marked-Up Copy of the Changes to the Specification  
As Amended on November 18, 2002

The first full paragraph on page 9 of the specification was replaced with the following paragraph:

--In the fuel cell comprising unit cells in the foregoing structure of this embodiment, the following effects can be obtained. MEA 4 is indirectly supported by a pair of resin films 6 and 7 pressed together through holder sheet [4] 5 and spacer sheet 5a. Thus, in the assembling of each unit cell 1, MEA 4 can be easily and exactly aligned under a constant specific pressure, thereby remarkably improving the working efficiency and handing during the unit cell assembling. Furthermore, the desired sealability can be obtained between separators 2 and 3 by cured rubber layers 8 and 9, and the sealability can be stably maintained even if the durability of the fuel cell is a long time, thereby preventing drying of the electrolyte membrane by evaporation of water and assuring a stable power generation efficiency.--